

What is claimed is:

1. A method for controlling access to database information, comprising:
receiving a database query directed to a database engine;
5 evaluating the query to determine system usage, prior to submission of the query
to the database engine; and
rejecting the query if the system usage surpasses a threshold value.
2. The method of claim 1, wherein said receiving further comprises:
10 receiving the database query from a user.
3. The method of claim 1, wherein said evaluating further comprises:
evaluating the query based on at least one of : a parameter of the query, a number
of relational databases used by the query, a size of a data field to be searched for the query, an
15 availability of resources of a system maintaining the database engine, a number of relational
database tables to be employed for the query, a limitation imposed on a size of a query result set,
a number of columns of data to be returned in a query result set, a cost of a similar stored query
and a number of function calls for the query.
- 20 4. The method of claim 3, further comprising:
assigning a score to the query based on said evaluating, wherein said rejecting
occurs when the score surpasses the threshold value.

5. The method of claim 4, wherein said assigning comprises:

assigning a value to a plurality of system performance variables;

determining a cost of the based on a weighted evaluation of at least one of
said variables.

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6. The method of claim 3. further comprising:

storing the query and the determined cost of the query.

7. The method of claim 1, wherein said system usage comprises at least one of:

estimated processor usage, estimated memory usage, input/output resource usage
and disk resource usage for a system maintaining the database engine to process the query.

8. The method of claim 1, wherein said threshold value is determined based on a
category of a user submitting the query.

9. The method of claim 8, wherein the category of the user is determined based on a
history of queries submitted by the user.

10. The method of claim 9, wherein said history of queries comprises histories of
scores of previous queries submitted by the user.

11. The method of claim 8, wherein the category comprises one of a plurality of
categories of increasing accessibility rights to search the database.

12. The method of claim 1, further comprising:
submitting the query to the search engine if the system usage is less than the
threshold value.

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13. The method of claim 1, wherein said rejecting further comprises:
editing the query so that the system usage is less than the threshold value; and
submitting the query to the database engine.

10 14. The method of claim 13, wherein said editing comprises at least one of:
providing an alternate search parameter, and providing a limit on the number of
results for the query.

15 15. The method of claim 13, further comprising:
transmitting a result of the query, after said submitting.

16. The method of claim 15, wherein said transmitting further comprises:
transmitting the result of the query to the user.

20 17. The method of claim 15, wherein said transmitting further comprises:
transmitting a portion of the result of the query to a user.

18. The method of claim 13, wherein said editing further comprises:

substantially optimizing the query for usage of system resources.

19. The method of claim 13, wherein said submitting comprises:
submitting the query to a second database engine.

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20. The method of claim 1, wherein said rejecting comprises:
offering to provide a portion of a result of the rejected query to the user;
submitting the rejected query to the server; and
providing a portion of the result of the query to the user.

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21. The method of claim 1, wherein said rejecting further comprises:
offering an alternative query in place of the rejected query.

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22. The method of claim 1, wherein said receiving, evaluating and rejecting are
performed by a screening server prior to submission of the query to a database engine.

23. The method of claim 1, wherein the database query comprises structured query
language.

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24. The method of claim 1, further comprising:
storing the query.

25. A computer readable medium encoded with processing instructions for implementing a method, performed by a computer, for controlling access to database information, the method comprising:

receiving a database query directed to a database engine;

5 evaluating the query to determine system usage, prior to submission of the query to the database engine; and

rejecting the query if the system usage surpasses a threshold value.

26. An apparatus for controlling access to database information, comprising:

10 means for receiving a database query directed to a database engine;

means for evaluating the query to determine system usage, prior to submission of the query to the database engine; and

means for rejecting the query if the system usage surpasses a threshold value.

27. An apparatus for controlling access to database information, comprising:

15 a processor; and

a memory in communication with the processor, the memory for storing a plurality of processing instructions enabling the processor to:

receive a database query directed to a database engine;

20 evaluate the query to determine system usage, prior to submission of the query to the database engine; and

reject the query if the system usage surpasses a threshold value.

28. A method for controlling access to database information, comprising:
receiving a database query directed to a database engine;
evaluating the query to determine system usage, prior to submission of the query
to the database engine; and
5 submitting the query to the database engine if the system usage does not surpass a
threshold value.

29. The method of claim 28, wherein said receiving further comprises:
receiving the database query from a user.

30. The method of claim 28, wherein said evaluating further comprises:
evaluating the query based on at least one of : a parameter of the query, a number
of relational databases for the query, a size of a data field to be searched for the query, an
availability of resources of a system maintaining the database engine, a number of relational
15 database tables to be employed for the query, a limitation imposed on a size of a query result set,
a number of columns of data to be returned in a query result set, a cost of a similar stored query
and a number of function calls for the query.

31. The method of claim 30, further comprising:
assigning a score to the query based on said evaluating, wherein said submitting
occurs when the score is less than the threshold value.

32. The method of claim 31, wherein said assigning comprises:
assigning a fixed value to a plurality of system performance variables;
determining a cost of the system query based on a weighted evaluation of each
assigned variables.

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33. The method of claim 31, further comprising:
storing the query and the determined cost of the query.

34. The method of claim 28, wherein said system usage comprises at least one of:
estimated processor usage, estimated memory usage, input/output resource usage,
historic performance of a similar query and disk resource usage for a system maintaining the
database engine to process the query.

35. The method of claim 28, wherein said threshold value is determined based on a
category of a user submitting the query.

36. The method of claim 35, wherein the category of the user is determined based on
a history of queries submitted by the user.

37. The method of claim 36, wherein said history of queries comprises histories of
scores of previous queries submitted by the user.

38. The method of claim 35, wherein the category comprises one of a plurality of categories of increasing accessibility rights to search the database.

39. The method of claim 28, further comprising:

rejecting the query if the system usage surpasses the threshold value.

40. The method of claim 39, wherein said rejecting comprises:

offering to provide a portion of a result of the rejected query to the user;

submitting the rejected query to the server; and

providing a portion of the result of the query to the user.

41. The method of claim 39, further comprising:

offering an alternative query to the user after said rejecting.

42. The method of claim 28, further comprising:

editing the query if the system usage surpasses the threshold value.

43. The method of claim 42, wherein said editing further comprises at least one of:

providing an alternate search parameter, and providing a limit on the number of

results for the query.

44. The method of claim 28, further comprising:

transmitting a result of the search after said submitting.

45. The method of claim 28, wherein said receiving, evaluating and submitting are performed by a screening server that receives queries directed to a database engine.

5 46. The method of claim 28, wherein the database query comprises structured query language.

47. The method of claim 28, further comprising:
storing the query.

10 48. A computer-readable medium encoded with processing instructions for implementing a method, performed by a computer, for controlling access to database information, the method comprising:

15 receiving a database query directed to a database engine;
evaluating the query to determine system usage, prior to submission of the query to the database engine; and
submitting the query to the database engine if the system usage does not surpass a threshold value.

20 49. An apparatus for controlling access to database information, comprising:
means for receiving a database query directed to a database engine;
means for evaluating the query to determine system usage, prior to submission of the query to the database engine; and

means for submitting the query to the database engine if the system usage does not surpass a threshold value.

50. An apparatus for controlling access to database information, comprising:
5 a processor; and
a memory in communication with the processor, the memory for storing a plurality of processing instructions directing the processor to:
receive a database query directed to a database engine;
evaluate the query to determine system usage, prior to submission of the
10 query to the database engine; and
submit the query to the database engine if the system usage does not surpass a threshold value.

51. A method for controlling access to database information, comprising:
15 receiving a database query directed to a database engine;
evaluating the query against system usage, prior to submission to the database engine; and
editing the query if the system usage surpasses a threshold value.

20 52. The method of claim 51, wherein said receiving further comprises:
receiving the database query from a user.

53. The method of claim 51, wherein said evaluating further comprises:

evaluating the query based on at least one of : a parameter of the query, a number of relational databases for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the database engine, a number of relational database tables to be employed for the query, a limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and a number of function calls for the query.

54. The method of claim 53, further comprising:

assigning a score to the query based on said evaluating, wherein said rejecting occurs when the score surpasses the threshold value.

55. The method of claim 54, wherein said assigning comprises:

assigning a value to a plurality of system performance variables;
determining a cost of the system query based on a weighted evaluation of at least one of said variables.

56. The method of claim 54, further comprising:

storing the query and the determined cost of the query.

57. The method of claim 51, wherein said system usage comprises at least one of:

estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage for a system maintaining the database engine to process the query.

58. The method of claim 51, wherein said threshold value is determined based on a category of a user submitting the query.

59. The method of claim 58, wherein the category of the user is determined based on
5 a history of queries submitted by the user.

60. The method of claim 59, wherein said history of queries comprises histories of scores of previous queries submitted by the user.

10 61. The method of claim 58, wherein the category comprises one of a plurality of categories of increasing accessibility rights to search the database.

10 62. The method of claim 51, wherein said editing further comprises at least one of:
15 providing an alternate search parameter, and providing a limit on the number of results for the query.

63. The method of claim 62, further comprising:
submitting the query to the database engine after said editing.

20 64. The method of claim 63, further comprising:
transmitting a result of the query after said submitting.

65. The method of claim 51, further comprising:

submitting the edited query to the database engine if the system usage surpasses a threshold value; and

transmitting a result based on the query after said submitting.

5 66. The method of claim 51, wherein said receiving, evaluating and editing are performed by a screening server that intercepts queries directed to a database engine.

67. The method of claim 51, wherein said editing further comprises:
substantially optimizing the query for usage of system resources.

10 68. The method of claim 51, wherein said editing comprises:
offering to provide a portion of a result of the rejected query to the user;
submitting the rejected query to the server; and
providing a portion of the result of the query to the user.

15 69. The method of claim 51, wherein the database query comprises structured query language.

20 70. The method of claim 51, further comprising:
storing the query.

71. A computer-readable medium encoded with processing instructions for implementing a method, performed by a computer, for controlling access to database information, the method comprising:

receiving a database query directed to a database engine;

5 evaluating the query against system usage, prior to submission to the database engine; and

editing the query if the system usage surpasses a threshold value.

72. An apparatus for controlling access to database information, comprising:

10 means for receiving a database query directed to a database engine;

means for evaluating the query against system usage, prior to submission to the database engine; and

means for editing the query if the system usage surpasses a threshold value.

73. An apparatus for controlling access to database information, comprising:

15 a processor; and

a memory in communication with the processor, the memory for storing a plurality of processing instructions directing the processor to:

receive a database query directed to a database engine;

20 evaluate the query against system usage, prior to submission to the database engine; and

edit the query if the system usage surpasses a threshold value.

74. A method for controlling access to database information, comprising:

receiving a database query directed to a database engine;

evaluating the query against system usage prior to submission to the database

5 engine; and

if the system usage surpasses a threshold value, performing at least one of the

following: submitting the query to the database engine with a limit on a number of returns

responsive to the query, editing the query, and rejecting the query.

10 75. The method of claim 74, wherein said receiving further comprises:

receiving the database query from a user.

76. The method of claim 74, wherein said evaluating further comprises:

15 evaluating the query based on at least one of : a parameter of the query, a number
of relational databases for the query, a size of a data field to be searched for the query, an
availability of resources of a system maintaining the database engine, a number of relational
database tables to be employed for the query, a limitation imposed on a size of a query result set,
a number of columns of data to be returned in a query result set, a cost of a asimilar stored query
and a number of function calls for the query.

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77. The method of claim 76, further comprising:

assigning a score to the query based on said evaluating, wherein said rejecting
occurs when the score surpasses the threshold value.

78. The method of claim 77, wherein said assigning comprises:

assigning a fixed value to a plurality of system performance variables;

determining a cost of the system query based on a weighted evaluation of each

5 assigned variables.

79. The method of claim 77, further comprising:

storing the query and the determined cost of the query.

10 80. The method of claim 74, wherein said system usage comprises at least one of:

estimated processor usage, estimated memory usage, input/output resource usage

and disk resource usage for a system maintaining the database engine to process the query.

81. The method of claim 74, wherein said threshold value is determined based on a

15 category of a user submitting the query.

82. The method of claim 81, wherein the category of the user is determined based on

a history of queries submitted by the user.

20 83. The method of claim 82, wherein said history of queries comprises histories of

scores of previous queries submitted by the user.

84. The method of claim 81, wherein the category comprises one of a plurality of categories of increasing accessibility rights to search the database.

85. The method of claim 74, wherein said editing comprises at least one of:
5 providing an alternate search parameter, and providing a limit on the number of results for the query.

86. The method of claim 74, further comprises:
submitting the query to the database engine if the system usage is less than the
10 threshold value.

87. The method of claim 74, further comprising:
determining a result based on the query; and
transmitting the result to a party from which the query originated.

88. The method of claim 74, wherein said receiving, evaluating and editing are performed by a screening server that intercepts queries directed to a database engine.

89. The method of claim 74, wherein said editing further comprises:
20 substantially optimizing the query for usage of system resources.

90. The method of claim 74, wherein said rejecting comprises:
offering to provide a portion of a result of the rejected query to the user;

submitting the rejected query to the server; and
providing a portion of the result of the query to the user.

91. The method of claim 74, wherein the database query comprises structured query
5 language.

92. A computer-readable medium encoded with processing instructions for
implementing a method, performed by a computer, for controlling access to database
information, the method comprising:

10 receiving a database query directed to a database engine;
evaluating the query against system usage prior to submission to the database
engine; and
if the system usage surpasses a threshold value, performing at least one of the
following: submitting the query to the database engine with a limit on a number of returns
15 responsive to the query, editing the query, and rejecting the query.

93. An apparatus for controlling access to database information, comprising:

means for receiving a database query directed to a database engine;
means for evaluating the query against system usage prior to submission to the
20 database engine; and

means for performing at least one of the following, if the system usage surpasses
a threshold value: submitting the query to the database engine with a limit on a number of returns
responsive to the query, editing the query, and rejecting the query.

94. An apparatus for controlling access to database information, comprising:
a processor; and

a memory in communication with the processor, the memory for storing a

5 plurality of processing instructions directing the processor to:

receive a database query directed to a database engine;

evaluate the query against system usage prior to submission to the

database engine; and

perform at least one of the following, if the system usage surpasses a

10 threshold value: submit the query to the database engine with a limit on a number of returns
responsive to the query, edit the query, and reject the query.

95. A method for querying a database, comprising:

transmitting a query to a search engine; and

15 receiving one of: a rejection of the query and a revised search criterion, prior to
receiving a search result based on the query.

96. A method for querying a database, comprising:

transmitting a query to a database engine; and

20 receiving one of: a rejection of the query and a revised search criterion, prior to
submission of the query to the database engine

97. A method for selectively controlling queries to a database comprising:
establishing a threshold value for system usage for a database query; and
activating a query screening process for a database engine wherein the system
usage for the database query is evaluated prior to submission of the query to the database engine.

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98. The method of claim 97, wherein if the system usage surpasses the threshold
value, the query screening process performs at least one of the following: the query is submitted
to the database engine with a limit on a number of returns responsive to the query, the query is
edited, and the query is rejected.

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99. The method of claim 97, wherein the database query comprises structured query
language.

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100. A computer-readable medium encoded with processing instructions for
implementing a method, performed by a computer, for selectively controlling queries to a
database, the method comprising:

establishing a threshold value for system usage for a database query; and
activating a query screening process for a database engine wherein the system
usage for the database query is evaluated prior to submission of the query to the database engine.

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101. An apparatus for selectively controlling queries to a database, comprising:
means for establishing a threshold value for system usage for a database query;
and

means for activating a query screening process for a database engine wherein the system usage for the database query is evaluated prior to submission of the query to the database engine.

5 102. An apparatus for selectively controlling queries to a database, comprising:

 a processor; and

 a memory in communication with the processor, the memory for storing a plurality of processing instructions directing the processor to:

 establish a threshold value for system usage for a database query; and
10 activate a query screening process for a database engine wherein the system usage for the database query is evaluated prior to submission of the query to the database engine.

15 103. A method for controlling access to database information performed by a screening server, comprising:

 receiving, from a user terminal, a database query directed to a database engine;

 evaluating the database query to determine system usage of the query at the database engine, prior to submission of the query to the database engine, said evaluating based
20 on at least one of : a parameter of the query, a number of relational databases for the query, a size of a data field to be searched for the query, an availability of resources of a system maintaining the database engine, a number of relational database tables to be employed for the query, a

limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored query and a number of function calls for the query;

determining a threshold value for system usage of the database engine,

wherein the threshold value is based on at least one of: estimated processor usage, estimated

5 memory usage, input/output resource usage and disk resource usage of the database engine; and

if the system usage surpasses a threshold value, performing at least one of the following: submitting the query to the database engine with a limit on a number of returns responsive to the query, editing the query, and rejecting the query.

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104. The method of claim 103, further comprising:

monitoring the actual system usage of the query after submission to the database engine; and

storing the database query and the actual system usage.

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105. A method for controlling access to database information performed by a screening server, comprising:

receiving, from a user terminal, a structured query language (SQL) query directed to a separate database engine;

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evaluating the database query to determine system usage of the query at the database engine, prior to submission of the query to the database engine, said evaluating based on at least one of : a parameter of the SQL query, a number of relational databases for the SQL query, a size of a data field to be searched for the SQL query, an availability of resources of the database engine, a number of relational database tables to be employed for the SQL query, a

limitation imposed on a size of a query result set, a number of columns of data to be returned in a query result set, a cost of a similar stored SQL query and a number of function calls for the query;

determining a threshold value for system usage of the database engine,

- 5 wherein the threshold value is based on at least one of: estimated processor usage, estimated memory usage, input/output resource usage and disk resource usage of the database engine;

if the system usage surpasses a threshold value, performing at least one of the following: submitting the SQL query to the database engine with a limit on a number of returns responsive to the SQL query, editing the SQL query, and rejecting the SQL query;

- 10 monitoring the actual system usage of the SQL query after submission to the database engine; and

storing the SQL query and the actual system usage.